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REVIEW OF NATIONAL ENVIRONMENTAL ACCOUNTING LAWS AND REGULATIONS

Report by the UNCTAD secretariat

Summary

This report reviews the legal requirements that exist in United Nations member States on environmental accounting matters. It is based upon replies to a questionnaire sent to all member States.

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INTRODUCTION

1. This report is based upon the replies to a note verbale and questionnaire circulated to all member States. Additionally, the questionnaire was sent to a number of national professional accountancy organizations and regulatory bodies, universities, and individuals considered qualified to respond to the questions. Replies from sources other than recipients of the note verbale cannot be considered to be the official response of a given country, but nevertheless represent an expert opinion on the subject matter.

2. A total of 63 replies were received from 55 countries and from the European Union. The United Nations Conference on Trade and Development acknowledges, with appreciation, the cooperation of the respondents in providing the information requested. The response rate is a considerable improvement over last year's result on the survey of new legal requirements and/or standards governing corporate accounting at the national level.

3. A number of respondents provided details of environmental protection laws, whereas only details of environmental accounting were requested. Clearly, environmental protection laws have an impact on the financial situation of an enterprise, and it is the recognition of environmental liabilities and provisions which is the area in which the accountancy profession has had considerable exposure to date.

4. Disclosure of environmental performance is another area in which the accountancy profession is involved. Previous ISAR research indicated that corporations generally are aware of the need to report information regarding their impact upon the environment. However, because many countries have not developed the required standards or even guidelines on environmental disclosures, the profession is at a great risk of compromising itself. The accountancy profession has had, in many countries, a tradition of self-regulation; hence the profession should take the initiative and formulate solid disclosure guidelines.

5. Without adequate guidelines, the underlying principles of accounting can be jeopardized by ad hoc and erratic disclosures. The basic accounting concepts of comparability, uniformity, reliability, relevance, neutrality and completeness can be lost, which places at risk the value of the information to users.

6. A significant number of replies to the survey questionnaire drew attention to the fact that, as more and more environmental protection laws are introduced, accountants must consider the responsibilities and obligations which are placed upon corporations. Provisions are increasingly being made for environmental rehabilitation.

7. Only one or two replies mentioned the concept of sustainable development, which indicates that on the whole, the accountancy profession has yet to begin to develop this concept and promote its adoption. The New Zealand reply accurately pointed out that countries with a high degree of dependence upon natural resources should pay greater attention to their management. Like financial resources, environmental resources must be measured, valued and monitored by accountancy.

I. SURVEY RESULTS

Argentina

8. There are no laws or regulations in Argentina which are concerned with environmental accounting and there are no plans to formulate any. Corporations have not adopted any form of environmental accounting.

Australia

9. Currently, Australia does not have any requirements for environmental accounting, with the exception of Australian Accounting Standard No. 1022, "Accounting for the Extractive Industries". This standard requires accountants

to make relevant provisions when there is an expectation that restoration costs will be incurred. The provision should be calculated as follows:

"(a) The costs of restoration work necessitated by exploration, evaluation or development activities prior to commencement of production shall be provided for at the time such activities take place and shall form part of the cost of the respective phase(s) of operations;

(b) The cost of restoration work necessitated by any mining activities after the commencement of production shall be provided for during production and shall be treated as a cost of production; and,

(c) In determining the amount to be provided in any one financial period, the balance of the provision for restoration costs, after charging against it actual costs incurred to date, shall be reassessed in the light of expected further costs".

10. Otherwise, environmental accounting is not regulated in Australia, so corporations can account and report as they choose. Research has shown that "out of a sample of 197 listed firms, 71 firms were identified by Deegan and Gordon as producing environmental information, either positive or negative". Environmental disclosures are discretionary and information provided to the public concerning the environmental impact of the corporation is often on a subjective basis rather than being substantiated and unbiased. Bodies such as the Australian Institute of Company Directors, the Australian Institute of Management, and the Business Council of Australia have produced environmental guidelines for their members to follow. Generally, these guidelines deal with disclosure policies but also emphasize that members should be environmentally responsible.

11. Further, corporations which fail to operate in harmony with the environment can suffer financially through changes in consumers' spending habits and investor preferences.

Austria

12. Austria does not have any laws or regulations which specifically relate to environmental accounting. The country is in the process of entering the European Union and hence will comply with its applicable guidelines.

13. The Austrian Government has taken the first steps towards the development and integration of environmental performance indicators into its national accounts. This work represents a substantial contribution to the introduction of a comprehensive environmental information system which will become a part of the Austrian national statistics.

Bahamas

14. There are no laws or regulations on environmental accounting in existence or planned in the Bahamas. Ocean dumping and solid waste disposal are the major concerns of environmental reporting. It is felt that strengthened environmental accounting regulations would enhance the natural environment and the quality of life of the residents and would encourage tourism.

Barbados

15. Barbados is in the process of establishing the necessary legislative and institutional framework within which environmental accounting could be achieved. The legislation which is currently in draft format concerns environmental management and conservation but does not specifically address the issue of environmental accounting. This will be dealt with in future regulations.

Belgium

16. Currently, there are no specific Belgian laws which pertain to environmental accounting. However, the Institute of Auditors is investigating the matter and will issue a document for its members in the future. A recent survey undertaken by the Catholic University of Leuven found that Belgian companies voluntarily mention environmental issues in their annual reports although this information is mainly descriptive, non-financial and partial. This finding is consistent with

previous reports by ISAR'. Generally, only positive environmental information is disclosed.

17. It is felt that environmental accounting regulations need strengthening so that there is comparability of information disclosed and to ensure that environmental data reported meet quantitative and monetary standards. Furthermore, there is a possible need for specialists to assist management with environmental reporting and the principal auditor in his work. Possibly, companies with a higher environmental waste risk should publish a special report to this effect.

Botswana

18. Botswana has a number of environmental protection laws, but there are no laws which specifically pertain to environmental accounting.

Brazil

19. There are no specific provisions for environmental accounting in Brazil; however known or potential liabilities stemming from environmental damages must be disclosed or adequate provision made. The Brazilian Securities and Exchange Commission has recommended that listed companies make reference in their annual reports to relevant environmental issues. Currently, legislation is being considered which will require all corporations to undergo an environmental audit for compliance with environmental protection laws. An environmental audit is defined as the periodic and organized examination of the technical and administrative aspects related to environmental protection activities of all productive units of an entity, with the following main objectives:

(a) To verify that all enterprises comply with the municipal, state and federal requirement to maintain and update their registrations, authorizations and licences;

(b) To verify that all enterprises comply with restrictions and recommendations contained in the licences granted to them and in studies on environment protection relating to equipment, procedures and sites;

(c) To verify that all enterprises comply with laws, rulings and regulations:

(i) as to standards of emission and of environmental quality of the regions in which they are located;

(ii) as to recovery and maintenance of related environment quality;

(d) To evaluate the environmental protection policies of enterprise as to their:

(i) procedures to appraise, control and prevent environmental damage in all forms;

(ii) usage and conservation of all forms of energy;

(iii) rational and economic use and transportation of raw materials;

(iv) rational use, conservation, recycling and reutilization of industrial water;

(v) minimization, recycling, treatment and disposal of solids, liquids and gaseous wastes;

(vi) improvement of the environmental impact of production processes;

(vii) improvement of the environmental impact of products;

(viii) prevention and reduction of accidents;

(ix) training, motivation and increased awareness of personnel with respect to the care and protection of the environment; and,

(x) disclosure of enterprise policies and procedures on environmental protection and disclosure of the involuntary risks to which communities may be subject.

20. Some corporations disclose environmental information although at a less than optimal level. In some instances, corporations have disclosed details of anti-pollution and recovery processes in accordance with recommendations made by the Securities and Exchange Commission. However, as the requirements are not mandatory, disclosure is on an ad hoc basis and therefore more comprehensive and enforceable guidelines should be introduced.

Bulgaria

21. Environmental accounting, introduced in Bulgaria in 1992 through the Accountancy Act, is an integral part of the country's environmental management policy. It is recognized that information is required to enable correct managerial decisions to be made concerning environmental policies and in the introduction and justification of appropriate economic regulations for environmental protection.

22. The Accountancy Act requires completion of two types of statistical forms to produce a single source of accounting and statistical information. All companies complete a form entitled "Environmental Protection - Costs", which contains details of expenditure for environmental purposes on non-current assets such as construction, rehabilitation and preservation costs of sites, the upgrading of equipment, and intangible assets such as software and patents. The cost of maintaining these "environmentally motivated" assets is reported, in addition to the costs of environmental activities such as re-cultivation, erosion prevention, lasting or major improvements to chemicals production, biological and integrated protection, and afforestation. The costs are broken down in accordance with the essential components of the environment and its protection, namely: water; air; soils; waste management; and noise prevention. Costs are also classified by activities, such as forestry and agricultural, for monitoring the development and management of wildlife and fisheries. The environmental sites at which costs have been incurred must also be reported.

23. Currently, the Government is formulating a standard which will deal with the environmental costs incurred in preserving the ecological balance and eliminating damage to the environment. Corporations will be required to report, in an appendix to their annual accounting report, information on environmental protection costs such as the fees paid for the right to pollute within admissible levels and the contingency costs of environmental degradation. These costs are to be reported for the current year and estimated for the following year. Violations of the regulations or incorrect information previously provided must be reported by corporations.

24. In spite of these accomplishments it is still felt that regulations to control the appropriateness and scope of environmental accounting information require strengthening.

Canada

25. Laws and regulations exist concerning the disclosure of quantitative and/or qualitative environmental information. The following areas in particular are dealt with in the existing statutes and standards:

(a) "When reasonably determinable, provisions should be made for future removal and site restoration costs, net of expected recoveries, in a rational and systematic manner by charges to income".[6] Such provisions are made either as a result of environmental law or contracts, or because the enterprise has established a policy to restore a site;

(b) Contingent liabilities, whilst non-specific, are also applicable to environmental considerations;

(c) Securities commissions at the provincial level require disclosure of "financial or operational effects of environmental protection requirements on the capital expenditures, earnings and competitive position of the issuer for the current fiscal year and any expected impact on future years".[7]

26. There are currently no laws or proposals on the broader environmental accounting elements such as sustainable development, full environmental cost accounting and environmental performance indicators.

27. The revision of existing accounting standards which concern the way in which environmental costs and liabilities are treated within the existing financial reporting model is under consideration by the Canadian Institute of Chartered Accountants (CICA). In October 1994, CICA, in association with other groups in Canada, published a study entitled Reporting on Environmental Performance, which

provides guidance to organizations on the various matters that should be taken into consideration when reporting on environmental performance. As stated in the foreword to the publication, "One of the objectives was to develop a framework for reporting in accordance with standards and expectations relating to environmental conduct and responsibility."

28. Interpretation of the accountancy guidelines as they apply to environmental costs and liabilities results in variations in the treatment of pollution control and site clean-up costs and there are difficulties with the recognition and measurement of environmental liabilities, and with the disclosure of environmental expenditures. A CICA 1993 publication entitled Environmental Costs and Liabilities: Accounting and Financial Reporting Issues gives recommendations for appropriate practice.

29. CICA feels that environmental performance, together with the use of indicators and additional environmental information (quantitative and qualitative) that are currently outside the scope of existing financial reporting, is an area of priority for the development of environmental accounting.

30. Furthermore, it is being suggested that the investment community could use information concerning regulatory compliance in measuring earnings, asset values, liabilities, risks and equity. Greater disclosure could lead to increased awareness of the environmental impact and performance of corporations and more attention might be spent on these matters by directors and management.

China

31. Although China has a number of environmental protection laws, there are no laws which specifically relate to environmental accounting. Disclosure of the following is considered to be important:

(a) The costs incurred by corporations to reduce and prevent pollution and restore the environment;

(b) Pollution-related costs and losses, such as compensation for environmental damage, fines for the breach of environmental protection laws, payments to the State for pollution licences, and clean-up costs;

(c) The social cost of pollution.

Colombia

32. Colombian corporations are required to disclose quantitative and qualitative environmental information in an annual report to the Government. This report contains information on the following: the extent to which the corporation conforms with environmental policies; the degree of environmental degradation caused by commercial activities; and the status of the management and conservation of natural resources. Furthermore, corporations whose operations have an impact on the environment must undergo environmental audits. For this reason environmental indicators are currently being devised. Also corporations which propose investment projects must provide an estimate of the expected environmental impact.

33. There are special measures on environmental protection and rehabilitation costs which break the data down by areas of impact such as water and air pollution, solid and liquid wastes, and noise. The information is divided into costs incurred in present and past operations. Details of expenditure on technological changes and innovations, research and development, and environmental impact studies must also be disclosed.

Croatia

34. Croatia is currently developing a number of environmental laws. Until such time as national standards have been developed, those of the European Union prevail.

Cyprus

35. There are no specific laws and regulations governing environmental accounting in Cyprus. The disclosure of environmental information occurs on a

voluntary basis and generally in conformity with relevant international accounting standards. A comprehensive environmental framework law is under consideration. The following areas are considered to be a priority for environmental accounting:

(a) Environmental revenues and capital expenditures;

(b) Fines imposed on enterprises and corrective measures taken;

(c) Contingent liabilities arising from failure to adopt environmental provisions.

Czech Republic

36. There are no laws in the Czech Republic which specifically deal with environmental accounting but a bill on the subject is under consideration. Tax laws allow a deduction for the creation of reserves to repair environmental damage. It is considered that the development of systems and procedures to include in the costs of production and sales the total costs related to depletion and restoration of the environment is the highest priority for new environmental accounting regulations. The Government is interested in discussing priority problems with representatives of other countries that are leaders in the field of environmental accounting.

Denmark

37. Denmark has incorporated the European Union's eco-management and audit scheme (see the section on the European Union below) into its own laws, and has established an environmental control agency. It is considered important that non-industrial sectors should be involved in this scheme, as well as small and medium-sized corporations.

38. Moreover, the Danish environmental legislation requires enterprises whose activities cause major environmental pollution to seek environmental approval from the authorities.

Ecuador

39. Ecuador does not have environmental accounting laws; however the accountancy profession recognizes the need for such laws and has made some preliminary studies of current international regulations to identify suitable standards for Ecuador. Current environmental accounting practices are ad hoc and depend on the policies of individual corporations.

Egypt

40. Laws require corporations to keep a register of their impact upon the environment; however, this information is not always disclosed in corporate annual accounts. More comprehensive environmental protection and preservation laws that are now being introduced are likely to lead to new environmental accounting regulations.

Fiji

41. At present Fiji has no environmental accounting laws or regulations, and does not plan to formulate any.

Finland

42. Finnish corporations have provided environmental information for a number of years, primarily on a voluntary basis but also in response to legislative requirements. Furthermore, public involvement in projects with significant environmental effects is increasing. Companies are obliged to report publicly on their emissions, chemical and energy usage and accidents, among other environmental matters. Finland will adopt the European Union regulations on voluntary participation in the environmental management and audit scheme.

43. Corporations provide environmental information in special reports or within the annual report. In some instances third parties have verified the environmental information contained in such reports. There is a trend to include environmental information in annual reports because it is felt that environmental protection and management should be an integral part of industrial activities and

hence should be reported as such rather than in the isolation of a special purpose report. Certain industries, such as the forestry and chemical industries, publish sectoral environmental reports.

44. It is suggested that pressure from clients, consumers and competitors can more effectively lead to improved environmental performance and management practices than strict mandatory requirements. International guidelines can also be effective in this area.

France

45. France has developed an ecological balance sheet which concerns the relationship between an enterprise and the environment. The depletion of natural resources and the problems of pollution are linked to the production process. Furthermore, corporations are increasingly aware of the benefits of integrating environmental protection into company management policies. A social balance sheet has also been formulated which pertains to the enterprise and its staff.

46. Both of these "new" balance sheets are in the format of a table of environmental issues and are expressed in monetary terms. Information is provided on the acquisition and utilization of equipment used to reduce pollution, recycled by-products, and reduced energy and raw materials consumption. This information may be assimilated into one table and may include expenditures and benefits on a number of items such as: environmental protection, royalties, licences and compensation costs for the prevention of pollution; operation and maintenance of equipment specifically purchased to help preserve the environment; grants or loans obtained at preferential rates to assist in the purchase of specific equipment.

47. An alternative proposal is to use an accounting system which highlights the company's contribution to environmental management. This system would involve three tables showing:

(a) An analysis of the productive activity (conversion of natural resources into products, sub-products and residues);

(b) The means employed and the results achieved in environmental protection;

(c) The impact of the company's activities on the national heritage of natural and man-made resources.

48. The aim of this "ecological balance sheet" is to help determine the cost of combating pollution and contribute to the rational use of energy and raw materials.

49. Currently, there are no binding provisions with regard to the inclusion of environmental information in annual reports; corporations may adopt procedures which differ from the norm. Some companies may have a section of their annual report devoted to environmental policies such as: the objectives pursued in processing waste and combating environmental pollution; the development of technology and new products which reduce energy consumption and pollution; and the management of major environmental hazards. Financial information is also provided, such as reserves for clean-up costs.

50. It is believed that there is a need for greater disclosure of environmental protection information and more guidance on contents and formats in order to facilitate better comparisons between various companies. Furthermore, information should be broken down into major themes, with quantitative data and uniform ratios (environmental performance indicators) to enable users to perceive with greater precision the efforts made by enterprises in the field of environmental management and risks.

Georgia

51. Georgia has no regulations for, or voluntary practices on, environmental accounting. Natural resources and environmental protection are considered to be priority areas to be addressed within corporate accounting and national accounts.

Germany

52. Germany has no accounting requirements specifically relating to the environment, with the exception of:

(a) An obligation to report investment activities in the field of waste disposal, noise reduction, and decreases in air and water pollution; and,

(b) The responsibility to record contingent liabilities for potential losses which may arise as a result of environmental protection laws. These laws are quite comprehensive and place considerable demands upon corporations. For example, manufacturers are obliged to dispose of consumers' wastes at the end of a product's life.

53. The concept of depreciation has been expanded to include environmental contamination and obsolescence of equipment due to changes in environmental protection laws. The tax deductibility of environmental cost provisions is being considered by the Federal Ministry of Finance.

54. On a voluntary basis some corporations provide environmental information in the form of an input/output analysis for products and processes and details of their environmental policies and measures taken to protect the environment. More comprehensive environmental disclosures are made on a non-compulsory basis by large corporations. The relevant European Commission regulations are possibly a factor in this. Corporations are also under an obligation to provide information which is of significance to financial markets. A number of large corporations have developed environmental balance sheets and have also undergone environmental audits.

55. Priority areas for environmental accounting disclosures include: details of expenses incurred to attain environmental goals, such as new technology to reduce air pollutants, and other wastes from production processes; emission fees; and provisions for environmental risks. It is felt that environmental accounting regulations concerning provisions against environmental protection and clean-up costs need strengthening. If corporations do not make adequate allowances, the State may have to assume financial responsibility.

Hungary

56. Although there are no comprehensive environmental accounting laws, certain environmental protection disclosures must be made. For example, annual company reports must contain information on: tangible assets acquired to protect the environment; the quantity and quality of the year's opening and closing volumes and values of hazardous waste (which is also classified by rating standards defined by law); and details of provisions made for environmental responsibilities and liabilities and for any contingencies.

57. Special tax concessions and depreciation allowances are available to encourage investments in equipment based on environmentally sound technology. Licences are required and fees are charged for conducting activities which are detrimental to the environment. Rehabilitation and clean-up costs must be considered as priority claims during insolvency procedures.

58. Legislation is being drafted to provide greater environmental protection. These laws do not specifically refer to environmental accounting, but by implication will require the expansion of existing accounting requirements, particularly concerning provisions for environmental protection and rehabilitation. Revised environmental protection laws could expand the role of accountancy in the cost/benefit analysis of management decisions.

59. Environmental awareness has affected the privatization process because the cost of previous environmental degradation and the use of unsound environmental technologies must be taken into account during the valuation process. Asset values are affected and there is a need to make provision for the rehabilitation of past and present environmental damage.

India

60. An environmental statement concerning water, raw materials, pollution, solid and hazardous wastes and disposal practices is required of all industrial organizations. Furthermore, company directors in their annual report must disclose measures taken for environmental protection. India does not require environmental accounting beyond these disclosure requirements. It is considered desirable for the impact of environmental protection measures on the profitability of an entity to be disclosed in annual reports.

Ireland

61. Ireland has no laws or regulations in respect of environmental accounting. Future laws in this regard will be those prescribed by the European Union. Reporting of environmental matters to date has been on an ad hoc basis, with environmental policies and internal structures established to comply with environmental regulations receiving particular attention.

62. It is felt that priority should be given to:

(a) The provision of environmental restoration and clean-up costs;

(b) A statement to outline expenditures incurred in implementing plans to achieve environmental objectives;

(c) The assessment and disclosure in a separate statement of the costs and benefits of a corporation's environment-related activities.

63. Furthermore, it is recommended that compliance with environmental accounting standards should be strictly enforced and breaches thereof should be penalized.

Italy

64. Italy follows the European Union requirements for environmental accounting. It is believed that only environmental issues which have a direct impact upon operating performance or financial position should be disclosed. This disclosure should be made in:

(a) The balance sheet, by way of disclosing details of provisions;

(b) The notes, in particular by disclosing details of valuation methods used for accounts, such as extraordinary items, contingent environmental liabilities, and environmental expenditures capitalized and/or charged to the profit and loss account;

(c) Other sections of the annual report, with a description of environmental issues and the management's response, environmental policies and implementation of environmental protection measures, details of government incentives relating to environmental protection measures, and compliance with existing and expected legislation concerning environmental protection.

65. There should be a reference to a separate environmental report when one exists.

66. It is felt that a great deal of the environmental information available at present is of a qualitative nature without an assessment of the financial implications. More quantitative information could increase the value of information to users. The introduction of full-cost or sustainable development accounting is still in its infancy, with many issues still to be resolved.

Japan

67. There are no environmental accounting laws in Japan nor is their formulation foreseen. However, if environmental issues have an impact upon a company's financial position and operating results for the current or future periods, the impact is disclosed in either the annual report or financial statements. A Japanese environment agency conducted a survey which revealed that 29.7 per cent of corporations report separately environmental costs and investments, in particular those dealing with pollution prevention and the cost of waste disposal. The survey also revealed that 36.7 per cent of corporations responded positively to the idea of formulating environmental disclosure guidelines.

Kenya

68. Kenya does not have environmental accounting laws and regulations, nor are any being planned. International standards, if appropriate, might be implemented in the future.

Lesotho

69. Lesotho does not have environmental accounting laws or regulations and none are currently being formulated. It is felt that priority should be given to disclosing in financial statements the costs incurred in compensating for the ecological damage caused by significant development projects in the country.

Luxembourg

70. There are no environmental accounting laws or regulations in Luxembourg.

Malaysia

71. Although environmental protection laws exist in Malaysia, there are currently no laws, nor are any being planned, which pertain to environmental accountancy. It is considered that details of capital expenditures and operating expenses incurred specifically to improve pollution control, occupational health and safety, product safety and waste management are areas of priority in the development of environmental accounting standards.

Mexico

72. At present Mexico does not have, nor does it plan to develop, environmental accounting laws and regulations. Businesses are able to depreciate equipment used to prevent and control pollution at accelerated rates for taxation purposes.

Morocco

73. Currently there are no environmental accounting laws or regulations in place in Morocco, nor are any being considered. Furthermore, there are no known environmental accounting practices followed by corporations. It is felt that priority should be given to the development of appropriate standards for supplementary information in annual financial statements to disclose:

(a) Qualitative information concerning environmental damage caused by corporations; and,

(b) Quantitative information on investment and development expenditures associated with environmental protection.

74. Improved environmental accounting could lead to greater sensitivity to environmental problems by management and heightened public awareness and appreciation of a corporation's environmental performance.

Nepal

75. Although Nepal has a number of environmental protection laws, there are no laws or regulations which specifically relate to environmental accounting.

Netherlands

76. The Netherlands has adopted an Environmental Protection Act which allows government authorities to monitor the environmental impact of corporations. Environmental accounting is not specifically regulated, although there is currently a bill on environmental reporting which requires corporations that place a large or moderate burden on the environment, or which pose special environmental risks, to report to the public on their environmental impact and their efforts to reduce damages.

77. The proposed annual environmental report is expected to contain legally prescribed requirements and require submission of completed documents to appropriate government authorities. The report will likely contain information of a quantitative and qualitative nature concerning: the emission of particular substances and noises; energy and raw material consumption; and the generation of waste and its treatment. Details of the measures taken and costs involved in reducing the extent of such emission, consumption or waste may also be included. Data may be required on the environmental impact of a corporation's products, in

the production and waste disposal phases for example, and materials recycling and site restoration possibilities. Possible environmental indices could be used as a medium to report the complete production, utilization and disposal cycles of the industrial processes. Furthermore, the report could also cover wider areas such as "transport flows to and from the corporation, research on the protection and rehabilitation of the environment, internal and external audits, public information campaigns and training given to employees".'

78. It is suggested that future trends should also be indicated in the data included in the report. The public would then be in a better position to gauge the extent to which the environmental impact of the corporation will increase or decrease. Difficulties in forecasting may restrict the forecast period to one year.

79. The bill does not aim to establish inflexible rigorous requirements. It is hoped that corporations will continue to develop the environmental reports that they already prepare on a voluntary basis; nevertheless the proposed special report must at least meet the minimum requirements that will be established.

80. Research in the country has shown that "of the 128 most polluting enterprises, some 30 have published or plan to publish environmental reports on a voluntary basis. This number is higher if enterprises are included which incorporate a description of their environmental policies in their corporate annual accounts or annual report".'

New Zealand

81. Although New Zealand does not have and is not preparing any laws specifically related to environmental accounting, there is a recent law which deals with environmental management (Resource Management Act, 1991). The law controls the use of natural resources and has as its stated purpose "...to promote the sustainable management of natural and physical resources". It defines "sustainable management" as:

> "...managing the use, development and protection of natural and physical resources in a way, or at a rate, which enable peoples and communities to provide for their social, economic and cultural well-being while:
> (a) Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations;
> (b) Safeguarding the life-supporting capacity of air, water, soil and ecosystems; and
> (c) Avoiding, remedying or mitigating any adverse effects of activities on the environment".

82. The law prescribes substantial fines and even imprisonment for infringements. Furthermore, the present owner or occupier of land is held responsible for contamination of that land, regardless of when the damage actually occurred.

83. New Zealand's accounting standards do not differentiate between environmental and other liabilities. Consequently, all liabilities must be provided for in a corporation's financial statements as either an actual liability, a provision, or as a contingency disclosed in the notes.

84. A large number of corporations are working towards improved environmental performance. A 1992 country survey revealed that 36 per cent of the largest corporations described their environmental activities and policies in their annual report. Although no corporations actually prepare "environmental accounts", some use non-financial measures to convey environmental results. A forest and timber products company has announced that it will publish a "greenhouse gas balance sheet", which will show to what extent greenhouse gas emissions from its manufacturing processes are offset by the absorption of the gases in its forestry plantation.

85. The New Zealand accountancy profession has recognized the potential business development opportunities in the field of environmental audits. Furthermore, to better assist their clients to gain the optimum advantages available within a system of environmental management, accountants must be completely familiar with environmental management laws. Accountants in some respects face a dilemma in dealing with provisions for yet-to-be- detected contamination which, if recognized within financial statements, is effectively an admission of responsibility.

86. Current accounting standards do not measure the productive capacity of a corporation's natural resources. Consequently, the long-term income-generating capacity of assets (and therefore their value) may be understated. This is particularly important to an economy such as New Zealand's whose natural asset base is critical to a relatively high proportion of its gross national product.

Pakistan

87. The concept of environmental accounting is new in Pakistan, and laws and regulations have not yet been introduced in this regard.

Panama

88. Currently there are no environmental accounting laws or regulations in Panama. It is suggested that priority areas for the formulation of such regulations are the disclosure of deforestation, soil degradation and pollution. Recently, a commission was established to develop an appropriate set of environmental statistics which will be used in national accounting with the aim of valuing natural resources.

Philippines

89. There are no rules or regulations regarding environmental accounting in the Philippines, although there are a number of laws which deal with environmental protection.

Poland

90. There are many laws and regulations in Poland with respect to the environment. One law specifies provisions for environmental damage caused by mining operations. However, there are no laws which are concerned with environmental accounting. The environmental protection laws give rise to responsibilities and potential liabilities for which possible obligations may need to be recorded. Fiscal instruments are in place for environmental matters, such as taxation incentives for positive activities and penalties and fines for environmental damage.

91. Poland is currently formulating a new accounting act. Although environmental accounting is not explicitly included, it will appear in subsequent revisions to the act. It is suggested that the valuation and recognition of specific environmental expenses or losses and the disclosure of environmental information in financial statements are areas in which greater guidance should be offered.

92. Corporations whose activities present a significant threat to the environment, such as those in the chemical industry, are inclined to provide more comprehensive disclosures. Details reported include:

(a) Environmental expenses and penalties;
(b) Environmentally sound investments;
(c) Future and current environmental policies; and,
(d) Details of the manner of cooperation between the corporation and the government's environmental agency.

93. The above information is usually provided for the current year and preceding three years. Provisions are sometimes made for obligations which arise due to the environmental protection laws, but the provisions are not allowable in the calculation of taxable income until the expenditures are actually made.

94. It is reported that priority should be given to the establishment of environmental accounting standards for the disclosure of:

(a) The formal policies and programme on protection of the environment;

(b) Improvements in environmental performance;

(c) Mitigation of environmental damage;

(d) The policy used by corporations to recognize environmental liabilities and provisions for contingent liabilities;

(e) Investments motivated by environmental considerations and the financial impact of such considerations.

95. It is noted that although environmental management has been the subject of much debate the accountancy profession and accountancy laws do not yet provide a sufficient answer to the problem.

Republic of Korea

96. There are no environmental accounting laws nor are any foreseen in the Republic of Korea. The following areas of environmental accounting are considered a priority:

(a) Compilation and integration of environmental and economic data;

(b) Institutional arrangements across the various environment- related government agencies for the development and promotion of an environmental accounting system;

(c) Development of a system to monitor the quality of the environment and the natural resources base;

(d) Linkage between physical information and economic data by valuation methods.

97. The framework must be appropriate on a country-by-country basis.

98. It is suggested that difficulties in the interpretation and usage of the existing physical information within national accounts require the development of a scientific method to incorporate the data, especially regarding the quality of the environment.

Russian Federation

99. Environmental accounting in the Russian Federation is limited to the statistical reporting of waste quantities and of current year expenditures on environmental protection measures and management. No changes to accounting laws and regulations are envisaged in the immediate future to incorporate environmental considerations.

Singapore

100. Singapore does not have laws and regulations relating to environmental accounting, nor or any being formulated. Corporations do not depart from established legal requirements. However, it is suggested that the disclosure of contingent liabilities and the social implications of environmental activities are an area of priority for which specific standards should be developed.

South Africa

101. There are no specific environmental accounting laws or regulations in South Africa. However, there are a number of laws which relate to environmental protection and management.

102. Recently, the University of Pretoria, in cooperation with the Chartered Association of Certified Accountants (a professional body based in the United Kingdom), studied environmental reporting in South Africa. This study found that "...only 17 per cent of the top listed companies in South Africa mention an objective or mission regarding the environment in their annual reports...only 7 per cent of the top listed companies in South Africa indicate that they have met their objectives regarding the environment."[10]

103. Generally, environmental reporting is restricted to the positive aspects of performance, and none of the company reports mentioned any negative aspects.

Only 8 per cent of the companies surveyed mentioned an environmental audit, of which only 15 per cent are independently attested. Generally, disclosure of environmental matters is done on an ad hoc basis."

104. South Africa will use the results of this survey to develop appropriate standards for environmental reporting which will be broadly based on the Institute of Chartered Accountants in England and Wales framework.[12] (See the section on the United Kingdom of Great Britain and Northern Ireland below.)

Spain

105. Although there are no specific environmental accounting provisions within the present laws and regulations, the Companies Act and the General Accounting Plan stipulate that any kind of risk must be accounted for; therefore environmental risks must be accounted for. Currently, the Chart of Accounts for the water distribution industry is being elaborated. According to the current state of the works, corporations in the water distribution sector will be required to provide information on the ecological impact of their activities. However there are no general rules being formulated for environmental accounting on a broader basis. A number of large corporations have disclosed environmental information on a voluntary basis, but as a general rule spanish corporations do not provide detailed environmental information, and the details that are provided are of a qualitative rather than a quantitative nature.

106. It is perceived that enterprises have difficulties in providing environmental information related to the environmental costs that are not obligatory for enterprises in order to comply with environmental protection laws. It is suggested that environmental information other than that which has a direct relationship to property values, the financial situation, or the operating results of a corporation should be disclosed in a special purpose report. If financial statements are required to provide more comprehensive environmental information, management may as a result adopt more environmentally sound policies. Consumer pressure can also contribute to this end.

Sudan

107. Environmental legislation exists to protect many aspects of the environment, although none relate specifically to environmental accounting. Areas which need development are: disclosures on the environmental impact of development projects; national accounts records of natural resources; and an appropriate methodology in the current accounting system to account for natural resources.

Switzerland

108. Swiss accountancy laws and regulations do not require corporations to provide details specifically on environment-related issues, except to the extent that environmental considerations have an influence on the financial position of the corporation as a consequence of complying with environmental protection laws. Nevertheless, a number of corporations voluntarily provide environmental information, the details of which vary significantly.

109. No new laws concerning the environment and accounting are under development at present. Priority areas of environmental accounting include: pollution, in particular from emissions; investments for environment protection; and the extent to which there could be potential future financial impacts due to environmental risks.

Thailand

110. Although there are laws which relate to the enhancement and conservation of the environment in Thailand, there are currently no environmental accounting standards. Some companies voluntarily disclose environmental concerns in their annual reports. Priority aspects of environmental disclosure include:

(a) Accounting policies and an environmental management plan, and the corporation's remedial activities and concept of sustainable development;

(b) Legal proceedings and compliance with legislative requirements;

(c) Research and development and capital expenditure related to the environment;

(d) Environment-related expenditures, liabilities and provisions;

(e) Any funds received from the public or State to support projects or activities specifically undertaken to improve the quality of the environment as a result of commercial activities.

111. A number of environmental accounting regulations should be developed, concerning: environmental audit expenses; research and development expenditures and the measurement and allocation of production costs; environmentally motivated investments; and environmental provisions and liabilities.

The former Yugoslav Republic of Macedonia

112. The country has several laws which deal with environmental protection, although there are none which specifically relate to environmental accounting. The main sections of the laws are on the atmosphere, water, natural resources, forests, land and noise. All corporations are obliged to measure and maintain records of pollution that results from their production processes. New environmental protection acts are expected to be based upon European Union recommendations and other international standards.

Trinidad and Tobago

113. At present there are no environmental accounting standards or guidelines in Trinidad and Tobago, nor are any being proposed.

Turkey

114. Turkey does not have any laws or regulations which concern environmental accounting.

United Kingdom of Great Britain and Northern Ireland

115. Currently, there are no environmental accounting regulations or laws in the United Kingdom, not are any being formulated. However, a number of corporations, particularly the largest ones, have introduced environmental disclosure on a voluntary basis. Furthermore, the recognition of environmental liabilities is growing, in addition to the disclosure of environmental provisions.

116. It is recognized that previous ISAR guidelines on environmental disclosures are widely accepted and could be elaborated. Environmental accounting on the whole needs strengthening for the benefit of society, to promote openness within corporations, and to foster greater self-esteem within the company itself.

117. Pressure from the public, both from individuals and corporations, can have an impact upon the policies adopted by corporations. For instance, a British hardware chain recently requested each of its suppliers to provide environmental audits for each of the products it purchased, otherwise the product might be excluded from the retailer's buying list. Furthermore, the Chartered Association of Certified Accountants has an annual competition to identify the corporation with the most comprehensive environmental accounting in its annual report.

118. A recent study by The Institute of Chartered Accountants in England and Wales [11] recommended a framework for environmental reporting which includes the following elements:

(a) Details of the corporation's environmental policy, not in the sense of an immediately attainable goal but more as an ideal to which the corporation will continuously strive. Also a mission statement should be prepared which describes the day-to-day efforts of the corporation to control its environmental impact;

(b) A statement of concrete objectives, preferably stated in specific, auditable terms, that are attainable within a relatively short period of time;

(c) Narrative disclosure of the company's activities which address core business issues rather than peripheral matters. These activities should be disclosed comprehensively on a site-by-site basis, be comparable to some

acceptable predetermined standards, and be formulated in specific rather than general terms;

(d) Quantitative disclosure of the corporation's environmental impact. The data should be both technical and financial, preferably integrated where possible. The following topics should be included: emission levels; energy consumption; noise levels; waste production and recycling;

(e) Quantitative disclosure of the following financial information to the extent that it is related to the environment:

(i) Policy disclosure of the accounting treatment and the environment-related aspects of financial statements;

(ii) Contingent liabilities;

(iii) Fines and penalties levied under environment protection laws;

(iv) Rehabilitation costs of hazardous waste disposal sites;

(v) Costs incurred to dispose of wastes;

(vi) Future costs which may arise from closure or abandonment of operating facilities;

(vii) Costs associated with the acquisition, installation and operation of environmentally sound equipment;

(viii) Costs associated with the redesign of products and processes to reduce reliance on hazardous materials and to minimize waste;

(ix) Legal, consultancy and administrative costs incurred to comply with environmental laws and regulations.

119. The study suggested that there is a need for further research into the following:

(a) The possibility of extending ordinary accounting conventions to encompass the external costs and benefits of a company's environmental impact;

(b) Understanding the use made of environmental information by participants in the capital markets;

(c) The development of reliable measures of environmental performance and their impact;

(d) The extent to which management information systems are being adapted to capture, process and report environmental data;

(e) The likely impacts of fiscal incentives on corporate behaviour.

United States of America

120. Although United States accounting standards do not comprehensively address environmental accounting issues, there are a number of rules on the reporting and recording of costs and liabilities that pertain to environmental matters. These are:

(a) A Financial Accounting Standards Board (FASB) Standard on "Accounting for Contingencies"[14], and a Standards Interpretation, "Reasonable Estimation of the Amount of a Loss"[15] which provide guidance on the recognition and disclosure of contingent liabilities, including environmental liabilities;

(b) An Emerging Issues Task Force (EITF) report, "Accounting for the Costs of Asbestos Removal"[16], which considers whether costs should be capitalized or treated as an expense;

(c) An EITF report, "Capitalization of Costs to Treat Environmental Contamination"[17], which also addresses the issue of capitalization or expensing of expenditures;

(d) An EITF report, "Accounting for Environmental Liabilities"[18], which addresses the measurement of a loss when recoveries are possible and whether the liability should be measured on a discounted or un-discounted basis.

121. The Securities and Exchange Commission has issued guidelines that pertain to the recognition, measurement and disclosure of environmental liabilities. The aim of these guidelines is to ensure that users of financial statements have sufficient pertinent information with which to make well-informed decisions.

122. Otherwise, corporations are not required to provide any other environmental information. Nevertheless, a number of corporations have begun to produce separate reports on the environmental impact of their operations.

123. The Environmental Protection Agency (EPA) requires companies to file a variety of reports concerning past, present and potential future pollution and contamination. The Agency has undertaken a programme to monitor hazardous waste materials as they move from "cradle to grave". The reports are available to the public.

124. The American Institute of Certified Public Accountants is drafting an accounting guide that will address accounting for environmental liabilities associated with past contamination. The guide will not provide guidance for ongoing or future contamination. The FASB will also consider accounting for nuclear decommissioning costs, among its other agenda items.

125. It is suggested that current accounting guidelines do not adequately address a corporation's future obligations to restore natural resources extraction sites. However, industries such as mining, electric utilities and oil and gas extraction are required to restore their extraction sites upon the termination of operations.

126. A survey of corporate environmental accounting was undertaken by Price Waterhouse in 1992. The following are the most salient findings[2]:

(a) One third of the respondent companies now have written environmental accounting policies...26 per cent of respondents disclose their environmental accounting policies in the notes to the financial statements;

(b) Known exposures to environmental clean-up liabilities have not been recorded by 62 per cent of the respondent corporations. The measurement and determination of the timing of these liabilities is a difficult task;

(c) Many corporations are utilizing their internal audit staffs to review compliance with government statutes, environmental accounting procedures, and adherence to internal policies;

(d) Typically, only certain extractive industries and the nuclear power industry accrue for future site restoration obligations.

Uruguay

127. Uruguay does not have laws and regulations specifically relating to environmental accounting, nor are any being drafted. Corporations generally do not adopt environmental accounting on a voluntary basis.

European Union

128. The European Commission has prepared an Eco-Management and Auditing Scheme, which is a series of guidelines for voluntary participation by industrial corporations. "The objective of this scheme is to promote continuous improvements in the environmental performance of industrial activities by:

(a) The establishment and implementation of environmental polices, programmes and management systems by companies in relation to their operating sites;

(b) The systematic, objective and periodic evaluation of the performance of the above activities;

(c) The provision of information on environmental performance to the public."[3]

II. CONCLUSIONS AND RECOMMENDATIONS

129. The questionnaire that was circulated requested information as to which areas of environmental accounting required strengthening in each country. Many respondents replied solely in terms of:

(a) Environmental disclosures on either a quantitative or qualitative basis; and/or,

(b) Environmental provisions and liabilities.

However, the questionnaire defined environmental accounting in the broader terms of: (i) disclosure; (ii) accounting for sustainable development or full cost accounting where industry practice has been modified to ensure the mutual long-term viability of the commercial activity and the environment; and, (iii) environmental performance indicators which may or may not link environmental information directly to financial data of the corporation.

130. The replies concerning recommendations for strengthening environmental disclosure were far more numerous and comprehensive than those concerning any other area of environmental accounting as defined by the questionnaire. It remains unclear whether the general perception is that environmental accounting should not extend beyond the two above-mentioned areas or that significant efforts need to be made by the profession to deal with environmental accounting in much broader terms.

131. The areas which ISAR has suggested previously for environmental expenditure disclosures[21] are supported by the questionnaire replies. From the replies it is not completely clear whether reporting should include quantitative and qualitative details on wastes, recycling and energy consumption. Areas of disclosure suggested in the replies, either from a monetary or physical viewpoint, for which ISAR has previously not provided guidance for disclosure, include: research and development; noise and vibration; fines and penalties; protection of land; and the social impact of industrial processes.

132. Also, environmental liabilities and provisions are areas which were suggested as requiring greater development in terms of accounting guidelines. Furthermore, the "non-traditional" areas of environmental accounting which the respondents suggested as areas for development include:

(a) Full-cost environmental accounting;

(b) Environmental performance indicators;

(c) The applicability of the traditional historical cost accounting model to the more demanding and challenging concept of accounting for sustainable development;

(d) Environmental auditing;

(e) The relationship between corporate environmental accounting and national accounting for natural resources.

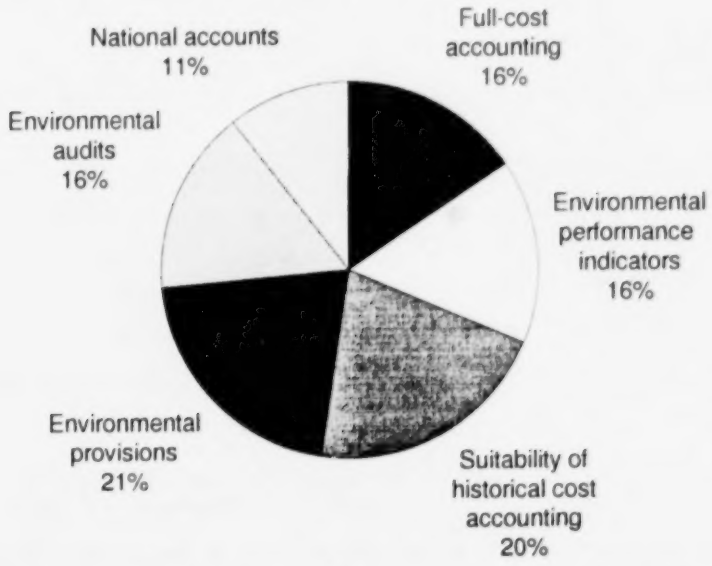

Chart I. " Non-traditional" topics suggested for further development

133. A number of replies indicated that concern by the general public and pressure from environmentalists were two factors responsible for corporations adopting environmental accounting practices on a voluntary basis. However, this approach can lead to inconsistent disclosures, which undermines the credibility of accounting and reporting.

134. According to an article which appeared in the 16 November 1994 edition of the Financial Times, financial analysts "... find it difficult to identify potential environmental risks because of the poor quality of information made available by companies...banks are paying more attention to their exposure to environmental risks and investors are starting to show concern about risks posed by companies with poor environmental records... Most of the information [environmental], including specific quantitative details, is arbitrary and self-determined. In very few cases is it possible to draw direct conclusions as to the implications for revenues and profit margins."

135. In many countries the accountancy profession is self-regulatory. In order to overcome some of the above-mentioned deficiencies, a more vigorous approach may need to be taken so as to maintain the integrity of the accountancy profession and to best serve the government, labour and other users of corporate reporting.

Notes

1. United Nations, E/C.10/AC.3/1994/3.

2. Australian Accounting Standards Board, AASB 1022 "Accounting for the Extractive Industries".

3. Institute of Chartered Accountants in Australia, "The Environment: an Accountant's Dilemma", Charter, August 1994, pp. 64-66.

4. Van Nuffel, L., Lin, L. and Lefebvre, C., "The External Corporate Environmental Reporting".

5. United Nations, E/C.10/AC.3/1992/3 and E/C.10/AC.3/1994/4.

6. Canadian Institute of Chartered Accountants, CICA Handbook, Section 3060.39, "Capital Assets".

7. Ontario Securities Commission, Policy Statement No.5.10, "Annual Information Form and Management Discussion and Analysis of Financial Condition and Results of Operations - Policies".

8. Extension of the Environmental Protection Act with regard to Environmental Reporting, bill and main passages of the explanatory memorandum, p. 17, draft of 24 January 1994, Ministry of Housing, Spatial Planning and the Environment, the Netherlands.

9. Environmental Reporting: Status Report for the Netherlands, KPMG Milieu, September 1993.

10. Green Reporting in the Republic of South Africa, first edition. School of Accounting Sciences, University of Pretoria, p. 53.

11. Ibid.

12. Business, Accountancy and the Environment: A Policy and Research Agenda, 1992, Institute of Chartered Accountants in England and Wales.

13. Business, Accountancy and the Environment: A Policy and Research Agenda, Institute of Chartered Accountants in England and Wales, 1992.

14. Financial Accounting Standards Board, Statement of Financial Accounting Standards No. 5.

15. Financial Accounting Standards Board, Interpretation No. 14.

16. Emerging Issues Task Force, issue No. 89-13.

17. Emerging Issues Task Force, issue No.90-8.

18. Emerging Issues Task Force, issue No.93-5.

19. Accounting for Environmental Compliance: Crossroads of GAAP, Engineering, and Goverment, Price Waterhouse, Second in a series, 1992, pp. 2-3.

20. European Council, Regulation No. 1836/93.

21. Conclusions on Accounting and Reporting by Transnational Corporations, Intergovernmental Working Group of Experts on International Standards of Accounting and Reporting, 1994, pp. 31-32.